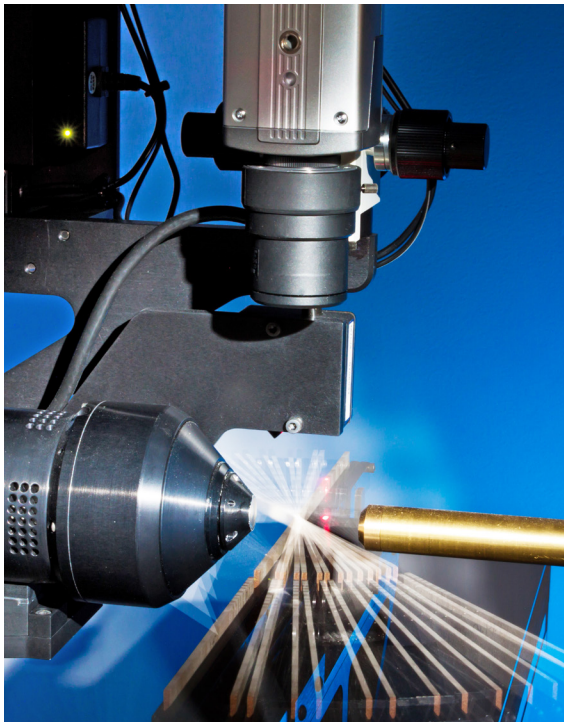
BRITISH COLUMBIA PULP AND PAPER SECTOR SUSTAINABILITY:

Sector Challenges and Future Opportunities



BRITISH COLUMBIA

Ministry of
Forests, Lands and
Natural Resource Operations

INTRODUCTION

The British Columbia forest sector provides well-paying jobs for tens of thousands of British Columbians, many of them in rural communities, and contributes taxes for important services across the province. This integrated sector is made up of many highly interdependent sub-sectors so it can make the most efficient use of and gain the most value from all the fibre harvested.

The pulp and paper sector processes as much as 50% of the total volume of timber harvested each year in British Columbia (B.C.) mainly in the form of residual chips, shavings, sawdust and hog fuel. It generates value from lower quality timber not suitable for manufacture into lumber and other solid wood products. The conversion of these residuals and lower valued fibre into high-valued pulp and paper products results in about $4 billion in sales annually to markets in China, the Unites States, Japan, and other Asian and European countries. The sector is, however, facing challenges as demand for certain types of paper declines and lower-cost competitors compete for market share.

In 2015, as part of a process led by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), senior government and forest industry representatives undertook to identify ways to maintain B.C.'s overall forest sector competitiveness. A collaborative review was undertaken on a number of the key subsectors of the forest sector to position them for the future.

The B.C. Pulp and Paper Sustainability Project was launched as part of this competitiveness agenda. The effort highlights the urgent need to address structural challenges facing the B.C. pulp and paper industry, provides practical solutions to immediate issues and recommends longer-term actions to achieve a progressive future vision.

Working together, industry and government can address competitiveness issues and are creating a framework that attracts investment so B.C.'s pulp and paper industry can realize its transformational vision.

PULP AND PAPER SUSTAINABILITY PROJECT

The B.C. Pulp and Paper Sustainability Project began in September 2015 as a part of the B.C. Forest Sector Competitiveness Agenda. It was led by a working group with members from all nine of B.C.'s pulp and paper companies (Canfor Pulp, Catalyst Paper, Domtar, Harmac, Kruger, Mercer, Neucel, Paper Excellence and West Fraser), four B.C. government ministries (Forests, Lands and Natural Resource Operations (FLNRO); Energy and Mines (MEM); Jobs, Tourism, Skills Training and Labour (JTST); and Technology, Innovation and Citizens Services (MTICS)), FPInnovations (FPI) and the UBC Pulp and Paper Centre (UBC).

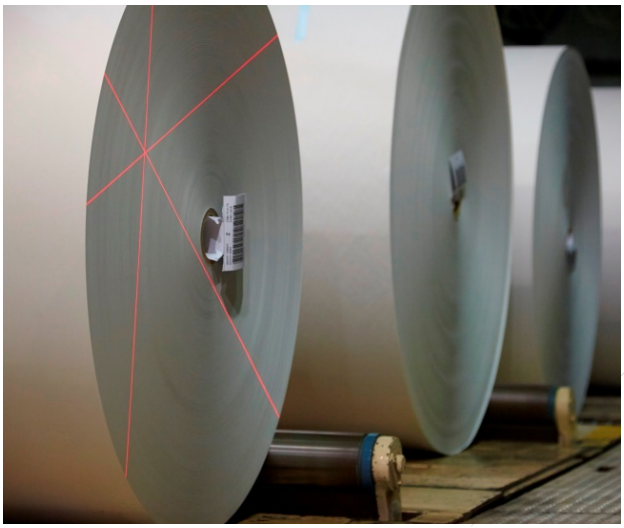
The working group's mandate was to embark on a collaborative approach to establish practical solutions to current priorities in the form of short- and long-term recommendations necessary to ensure the competitiveness and sustainability of the pulp and paper sector in B.C.

The working group led to the formation of the Pulp and Paper Coalition and the establishment of the following vision for the industry:

The Pulp and Paper industry is committed to make its facilities globally competitive to serve the higher growth, sustainable market pulp and paper segments. By leveraging the integrated advantages of the B.C. forest products sector to create low-carbon, fibre-based bio-products and renewable energy solutions from wood residual, benefits will be shared throughout British Columbia:

- *Economically (funding re-investment, employment and rural community well-being);*
- *Environmentally (reducing B.C.'s carbon footprint and growing clean power capacity); and*
- *Socially (becoming a global leader of high-value, fibre-based bio-products).*

INDUSTRY SIGNIFICANCE



B.C.'s pulp and paper industry remains a critical component of the B.C. forest sector. It accounts for an average of 20% of the total GDP generated by the forest sector, and 34% of the value of provincial forest product exports. In 2015, B.C. exported $3.3 billion of pulp products and $1 billion of paper products.

B.C.'s pulp and paper industry is an essential part of B.C.'s highly integrated forest industry landscape. The industry is vitally linked to the forest sector as an outlet for residual chips, shavings, sawdust and hog fuel from sawmills in the creation of value-added products from these fibre streams. The solid wood sector remains reliant on the social licence provided by the presence of a healthy pulp and paper industry. The sector has also become a major producer of bioenergy in North America, and one of the largest users of railways in B.C. and of the Port of Vancouver.

B.C. currently operates 13 pulp facilities (nine in the interior, four on the coast) and five paper mills (one in the interior, four on the coast). In 2015, the industry directly employed 10,100[1] individuals in B.C. Pulp and paper mills in B.C. are predominantly located in smaller communities, creating well-paying, stable jobs and supporting communities by purchasing goods and services and through municipal taxes.

[1] 'Source: Statistics Canada, Labour Force Survey (unpublished data). Reproduced and distributed on an "as is" basis with the permission of Statistics Canada. Prepared by BC Stats June 2016

CHALLENGES AND OPPORTUNITIES

B.C.'s pulp and paper industry is facing global competitive challenges from new lower-cost pulp mills in the Southern Hemisphere, major investments by softwood pulp producers in Scandinavia, and reduced demand for printing and writing papers. Within B.C., it faces a decline in timber supply as a result of the mountain pine beetle epidemic, re-investment challenges and a number of taxation and energy realities.

It is critical for B.C. pulp and paper operations to adapt to changing market conditions and find innovative means to sustain a fibre supply, reduce costs, access new markets and develop new products to remain globally competitive. While this transformation from a commodity-based supplier to a more diversified producer of bio-products and renewable energy solutions will generate additional synergies with the B.C. solid wood sector, it will require significant effort from all partners in the Pulp and Paper Coalition.

The B.C. pulp and paper industry has begun to take meaningful strategic action including capitalizing on growth-oriented pulp markets, such as China, producing more renewable energy and bio-products and moving to more sustainable paper market segments such as specialty papers, packaging and tissue/towel.

The B.C. industry has become one of the largest users and producers in North America of clean bioenergy from biomass, and has been the main driver in forest sector greenhouse gas reductions. It has numerous biomass energy purchase agreements with BC Hydro, and has capability to expand biomass generation to better utilize fibre and meet the objectives of the B.C. Climate Leadership Plan. Pulp and paper facilities have the infrastructure and biomass handling capabilities needed to host co-generation and other new technology investments such as bio-products.

With these initiatives, with the pulp and paper sector working collaboratively with government and others, B.C. can become a leader in the production of low-carbon, sustainable products.

RECOMMENDED ACTIONS

Industry, government, and research institutions will all play a role in the pulp and paper industry's revitalization and transformation. The actions recommended here reflect a wide range of opportunities regarding fibre supply, energy and other major inputs, hosting conditions, and transformative technologies in support of the sector's vision. They are directed towards upstream cost sources and downstream value generation.

The following recommendations and actions focus on where and how industry, government, and research institutions can continue to collaborate in the first major steps towards addressing key competitiveness, investment and revenue diversification issues to build a solid business foundation for future sustainability and growth. A number of these concepts require further policy development and exploration by the B.C. government.

Cost Competitiveness Priorities

Fibre

- Address imminent regional fibre shortages and deliver environmental benefits by:
  - Reducing waste through more efficient and environmentally effective access to and use of logging and processing residues.
  - Increasing the volume of fibre available by extracting more pulp logs and biomass from logging sites on first pass**.**
  - Identifying other regional specific fibre solutions, to be initiated by industry.
- Expedite the approval process of the pilot routes for the introduction of higher payload chip trucks.
- Develop a forecast of the 10-year supply of biomass/hog fuel availability on the B.C. coast and in the interior.

Energy

- Assess the economic, environmental and societal impact of clean biomass power generation for the forest sector.
- Develop a biomass energy policy framework that meets government's carbon plan and utilization objectives, and considers the implications on ratepayers.
- Benchmark consumption taxes on energy used in industrial processing and assess their impact.
- Work with BC Hydro to extend the energy conservation programs and include electrification and fossil fuel switching used in the production process.

Major Inputs

- Reduce forest sector supply chain costs.

Investment Considerations

Environmental

- Work with government to streamline the administration of permit applications for projects where emissions are not increased.
- Review and streamline auditing and reporting methods for greenhouse gas reporting requirement to reduce administrative burden.

First Nations

- Continue to develop more effective processes to consult and engage First Nations with respect to investment on mill sites (fee simple lands) and adjacent waters that have a neutral or positive environmental and social impact.

Revenue Diversification and Growth

Bio-products

- Build a B.C. bio-products alliance to collaboratively pursue development of new transformative technologies best suited for the B.C. forest sector with all B.C. pulp and paper companies, the B.C. government, UBC and FPInnovations.

Climate Leadership Plan

- Provide a comprehensive response to the Climate Leadership Plan that safeguards the competitiveness of the trade-exposed sector and builds upon an excellent track record of greenhouse gas reduction. A separate report compiled with input from the entire forest sector has been submitted to the Climate Leadership Team; the sector looks forward to participation in BC's emerging Climate Leadership Plan.

RECOMMENDED ACTIONS (LONGER-TERM)

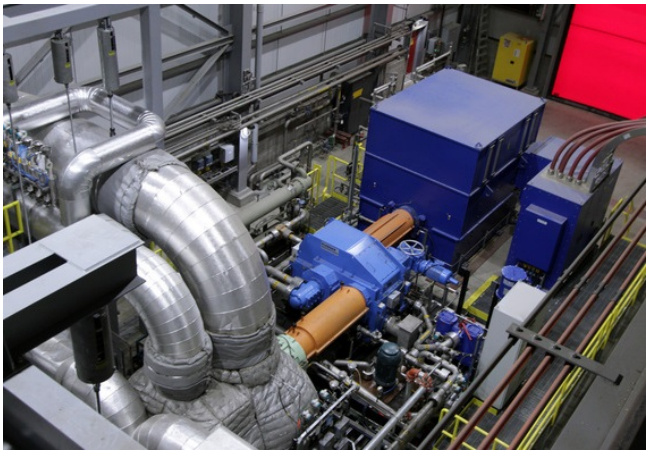
As progress is made on the above noted recommendations, the same collaborative process will be used to examine the following topics, which require more in-depth work. These include:

- Improving the quality of biomass/hog fuel for energy use.
- Participating in energy discussions regarding rate programs for all industries and ratepayers.
- Considering opportunities for secondary manufacturers to acquire additional fibre volumes and security, potentially in partnership with tenure holders and First Nations.
- Incorporating new technological developments and conservation measures to improve power boiler efficiencies to increase the generation capacity of biomass/hog fuel power generation.
- Developing and supporting labour and human development strategies within industry.
- Improving the environmental administrative process by basing fees on actual emission levels and not on maximum potential emissions.
- Investigating disincentives to investments placed on industry by B.C. and local governments.

NEXT STEPS

To implement the priorities, the working group recommends continuation of the current collaborative model through a Pulp and Paper Coalition of companies, government and research institute representatives. The purpose of this group is to maintain the momentum and advance practical solutions to support identified priority actions. A comprehensive implementation plan will be developed.

Consideration and assessment for implementation of these actions by the B.C. Government will create a more competitive and sustainable B.C. pulp and paper industry, begin the transformation to achieve the vision for the sector, and protect high-paying jobs primarily located in rural communities.



BRITISH COLUMBIA

Ministry of
Forests, Lands and
Natural Resource Operations

August 2016